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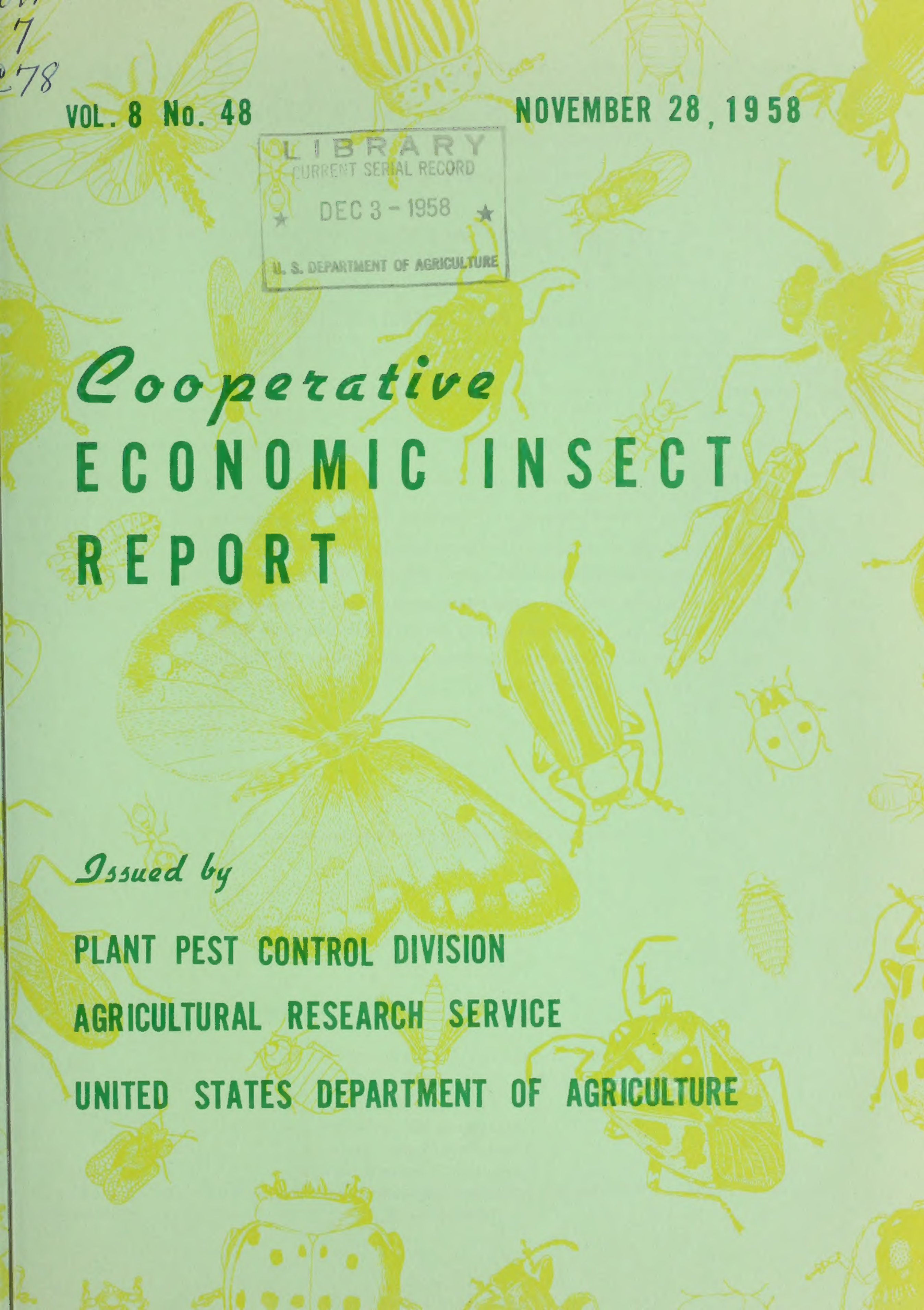

Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Plant Pest Control Division
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Volume 8 November 28, 1958 Number 48

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

PINK BOLLWORM heavier in Oklahoma than in any previous year. (p. 965).

Survey in Minnesota indicates possible increase in area of heavy FOREST TENT CATERPILLAR infestation in 1959. (p. 966). A PINE TIP MOTH severe throughout eastern part of Texas. (p. 966).

INSECT DETECTION: White-fringed beetles found for first time in Decatur County, Georgia. (p. 965). Pink bollworm reported for first time in 5 counties in Arkansas and in 2 parishes in Louisiana. (p. 965). Imported fire ant found for first time in one parish in Louisiana and 2 counties in Mississippi. (p. 969). A cucujid (*Hemipeplus marginipennis*) new to California. (p. 969).

HIGHLIGHTS OF INSECT OCCURRENCE - 1958, CANADA (p. 971).

The RICE DELPHACID, *Sogata orizicola*, and two closely related species. (p. 973). In the interest of the important rice disease "hoja blanca" and its only known vector, *S. orizicola*, an illustrative key for peparating this species from two other species of *Sogata* that are known to occur in the United States has been prepared by the Insect Identification and Parasite Introduction Laboratories, ENT, ARS. Separates are available on request.

INSECTS not known to occur in the United States. (p. 975).

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Reports in this issue are for the week ending November 21, unless otherwise designated.

WEATHER OF THE WEEK ENDING NOVEMBER 24

The week, introduced by the first severe winter storm of the season, with its accompanying blizzard or near-blizzard conditions in the Plains States and adjacent areas, ended more pleasantly with generally light winds, seasonal tempertures and light precipitation which for the most part fell in the northern tier of States. Precipitation exceeded 2 inches in the coastal area of the Pacific Northwest, parts of the northern Rocky Mountain region, in a band from near Topeka, Kansas, to southern Wisconsin and in the vicinity of Cleveland, Ohio, where the 24-hour amount of 2.23 inches on the 18th and 19th exceeded the 15-year November record at Cleveland Airport. Less than $\frac{1}{2}$ inch fell over the greater share of the country and areas without measurable precipitation included southern California, most of Nevada and Arizona, south central Texas and continued in the East from parts of North Carolina to western Florida.

Temperatures averaged above normal east of the Plains States with departures of 6° or more in most sections. Weekly averages were 9° above normal in the lower Ohio Valley and parts of the Great Lakes and Northeast. Elsewhere, temperatures averaged from near normal to about 6° below normal, with most of the greatest departures in the Central and Southern Plateau region and averages for the week ranged down to 9° below normal at some stations in the Great Basin. On Monday, the 17th, the weather cleared over the Far West and temperatures fell to unseasonably low levels with numerous below zero readings from Montana to Utah. Tuesday, the cold weather continued southward and Flagstaff and Tucson, Arizona, reported new record November low temperatures of -13° and 24°. Early in the week record or near-record heat was experienced at many places in the East, from the Atlantic to the lower Mississippi and lower Great Lakes. On Wednesday, Buffalo, New York, had a record 74° for so late in the season; however, quite a change occurred as the cold front pushed by in the afternoon. This cold air, by the week end, brought considerably cooler weather to northern Florida.

The severe storm with moderate to heavy snow in the Rocky Mountains and northwestern Great Plains at the end of the previous week, deposited a heavy mantel of snow at the beginning of this week in North Dakota and northern Minnesota. High winds set new records at Minneapolis and Duluth, Minnesota, and were responsible for many injuries in that State and considerable property damage from eastern North Dakota to Michigan. Several Minnesota counties along the north shore of Lake Michigan were declared disaster areas. (Summary supplied by the U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - WISCONSIN - A total of 15,224 acres were treated for grasshopper control in the State. Estimated loss from grasshoppers was $178,500, while estimated savings from control were $345,000. (PPC, Cent. Reg., Oct. Rpt.).

SORGHUM MIDGE (Contarinia sorghicola) - OKLAHOMA - Overwintering larvae found in sample taken from heads of grain sorghum from a field at Stillwater; infestation 12.2 percent. (Bryan).

APPLE GRAIN APHID (Rhopalosiphum fitchii) - OKLAHOMA - Averaged 0-25 per linear foot in some fall seeded wheat fields in northeastern area. (VanCleave,Campbell).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Averaged 0-25 per linear foot in some fields of fall seeded barley in northeastern area. (VanCleave, Campbell). TEXAS - Light on barley in Comanche County. (Hawkins).

GREENBUG (Toxoptera graminum) - OKLAHOMA - All instars found, including winged adults, in fall seeded small grain fields in Ottawa, Delaware, Craig, Mayes, Wagoner, Rogers, Nowata, Washington, Tulsa, Osage, Pawnee, Kay, Noble, Payne and Logan Counties in northeastern area. Populations averaged up to 50-75 per linear foot in some localities; higher in clumps of volunteer plants. Total of 75 fields surveyed. (VanCleave, Campbell). TEXAS - Light on wheat in Deaf County (Thomas) and in Potter and Oldham Counties. (Daniels, Hawkins).

CHINCH BUG (Blissus leucopterus) - WISCONSIN - Survey in southern and some northwestern counties gave negative results. (Wis. Coop. Sur.).

ALFALFA WEEVIL (Hypera postica) - DELAWARE - Adults common in alfalfa and clovers in New Castle and Kent Counties with a few larvae being found in alfalfa. (Burbutis, Conrad).

CLOVER ROOT CURCULIO (Sitona hispidula) - OREGON - Caused more damage to first-seed-crop-year alsike clover in Klamath County than any year during the observation period 1953 through 1958. (Dickason). DELAWARE - Adults unusually common in clovers and alfalfa in New Castle and Kent Counties. (Burbutis, Conrad).

PEA APHID (Macrosiphum pisi) - OKLAHOMA - Averaged 5 per 25 sweeps in some alfalfa fields in northeastern area. (VanCleave). KANSAS - Averaged 25 per sweep on alfalfa in Cherokee County. (Peters).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Averaged 0-5 per sweep in some alfalfa fields in northeastern area (VanCleave) and 1.8-2.0 per sweep in field of alfalfa in Tillman County (Hatfield). VIRGINIA - Very heavy in 2 fields of seedling alfalfa and in one field of old alfalfa in Franklin County. One field of seedling alfalfa was so far gone that it was judged best to abandon it and re-seed in the spring of 1959. (Bishop, Tucker, Morris). TEXAS - Medium to heavy on alfalfa in Hunt County. (Davis). KANSAS - Averaged 10 per sweep on alfalfa in Cherokee County. (Peters).

GREEN JUNE BEETLE (Cotinis nitida) - NORTH CAROLINA - Larvae infesting lawn in Macon County. (Fagg, Farrier). MARYLAND - Larvae making holes in lawns in Towson. (U. Md., Ent. Dept.).

RHODES-GRASS SCALE (Antonina graminis) - TEXAS - Damaged St. Augustine grass in Hunt County. (Wheeless).

SOYBEAN CYST NEMATODE (Heterodera glycines) - MISSOURI - One new infested property was found near Portageville in Pemiscott County. KENTUCKY - A positive determination was made from a soil sample collected from a farm located near Hickman in Fulton County. (PPC, Cent. Reg., Oct. Rpt.). NORTH CAROLINA - An infestation was found in Gates County, about one-tenth of a mile south of the Virginia State line. Infestations were confirmed on 2 properties involving 13 acres. Three additional properties were found infested in each of Pender and Pasquotank Counties. (PPC, So. Reg., Oct. Rpt.).

FRUIT INSECTS

LESSER PEACH TREE BORER (Synanthedon pictipes) - ALABAMA - Moderate to heavy on Escambia County peach trees. (Grimes, Blake).

PEACH TREE BORER (Sanninoidea exitiosa) - ALABAMA - Moderate to heavy on peach trees in Escambia County. (Grimes, Blake).

APPLE APHID (Aphis pomi) - NORTH CAROLINA - Infesting apple trees in Rowan County. (Satterwhite, Smith).

HICKORY SHUCKWORM (Laspeyresia caryana) - TEXAS - Caused light damage to pecans in Dickens County. (Conner).

NAVEL ORANGEWORM (Paramyelois transitella) - CALIFORNIA - Medium in walnuts in Bakersfield, Kern County, and light on oranges in Otay, San Diego County. (Cal. Coop. Rpt.).

A TWIG GIRDLER - TEXAS - Damaged pecans in Anderson County. (Hooper).

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Heavy on tangerine trees in Bakersfield, Kern County, and on lemon trees in Orland, Glenn County. (Cal. Coop. Rpt.).

OBSCURE SCALE (Chrysomphalus obscurus) - TEXAS - Damaged pecan trees in Wharton County. (Ragen).

WHITE PEACH SCALE (Pseudaulacaspis pentagona) - ALABAMA - Peach orchard of over 500 trees in Escambia County has heaviest infestation of this scale observed in 1958 and continues to present a problem. (Grimes).

YELLOW SCALE (Aonidiella citrina) - CALIFORNIA - Heavy on citrus in Orland, Glenn County, and on a lemon tree in Red Bluff, Tehama County. (Cal. Coop. Rpt.).

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Inspection of 50,641 trees on 1,965 properties in the States of Sonora, Nuevo Leon and Tamaulipas revealed 15 trees infested on 8 properties. (PPC, Mex. Reg., Oct. Rpt.).

TRUCK CROP INSECTS

PICKLEWORM (Diaphania nitidalis) - ALABAMA - Moderate on squash in Escambia County. (Grimes, Blake).

APHIDS - OKLAHOMA - Severe infestations, probably Myzus persicae, on spinach in Arkansas River Valley between Haskell and Sequoyah Counties. (Washum).

CABBAGE APHID (Brevicoryne brassicae) - ALABAMA - Numerous on broccoli, rape and collards in Lee County. (Guyton). CALIFORNIA - Numerous in untreated fields. (Campbell).

POPLAR PETIOLE GALL APHID (Pemphigus populi-transversus) - ALABAMA - Severe on roots of turnips in Escambia and Baldwin Counties. (Grimes, Blake).

TURNIP APHID (Rhopalosiphum pseudobrassicae) - OKLAHOMA - Heavy infestation on turnips in gardens in Payne, Logan, Lincoln and Osage Counties. (Howell). Killing turnips in Marshall County. (Vick). ALABAMA - Heavy on leaves of turnips in Escambia and Baldwin Counties (Grimes, Blake) and heavy on turnips in Lee County. (Guyton).

SOUTHERN GREEN STINK BUG (Nezara viridula) - ALABAMA - Moderate numbers on turnips in Baldwin County. Few egg masses found. (Grimes, Blake).

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - ALABAMA - Larvae caused severe damage to turnips and mustard in Lee County. (Guyton).

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - Surveys in the program States revealed 73 new infestations in 16 counties and parishes. The heaviest outbreak occurred in Caddo Parish, LOUISIANA, north of Shreveport near Blanchard, where 21 infestations were found. No new counties or parishes were found infested. (PPC, So. Reg., Oct. Rpt.).

WHITE-FRINGED BEETLES (Graphognathus spp.) - GEORGIA - Decatur County was found infested for the first time. An infestation on about 600 acres in northwestern Erwin County, although not new, was very heavy and caused severe damage to approximately 30 acres of sweetpotatoes. ALABAMA - Inspections in 14 counties were generally negative, except for locations in Chilton and Jefferson Counties. Eradication treatments of the Madison County infestation were progressing very satisfactorily. MISSISSIPPI - Surveys extended the infested areas in Marion and Walthall Counties. One extension was also found east of the known infested area at Bay Springs, Jasper County. FLORIDA - Inspections in 8 counties revealed no new infestations. Eradication work was carried out in 5 other counties. SOUTH CAROLINA - An additional 538 infested acres were found in the Myrtle Beach infestation. NORTH CAROLINA - Surveys in 17 counties revealed extensions in 6 counties totalling 403 acres. TENNESSEE - Additional infested acreage was found in the city of Memphis and also in the cities of Paris in Henry County and Lexington in Henderson County. (PPC, So. Reg., Oct. Rpt.).

POTATO LEAFHOPPER (Empoasca fabae) - CALIFORNIA - Heavy on string beans in Spring Valley, San Diego County. (Cal. Coop. Rpt.).

COTTON INSECTS

PINK BOLLWORM (Pectinophora gossypiella) - ARKANSAS - Found for the first time in Ashley, Clay, Drew, Faulkner and White Counties, outside the regulated area. Specimens also recovered from Little River, Howard, Hempstead, Miller, Lafayette, Columbia, Clark and Crawford Counties. LOUISIANA - Larvae were found in 4 parishes outside the regulated area, Union and Lincoln Parishes had previously been infested, but Rapides and Grant Parishes were infested for the first time. OKLAHOMA - Inspections of gin trash, lint cleaners and gin stands revealed infestations in 18 counties and that infestations are heavier for 1958 than in any previous year. TEXAS - Inspection of 591 bushels of gin trash in 26 central and eastern counties resulted in finding 83,844 larvae, or an average of 141.75 per bushel, compared with 16.49 per bushel for 1957. The 1958 infestation, percentage wise, is therefore about eight and one-half times heavier than in 1957. MISSISSIPPI - An intensive inspection program in the main cotton producing counties has been negative to date. (PPC, So. Reg., Oct. Rpt.). MEXICO - Infestation has built up in the La Laguna region of Coahuila and Durango and in the Delicias zone of Chihuahua. In the La Laguna region it has been estimated that losses will run 10-15 percent. In Chihuahua, 30 lint cleaner inspections revealed 689 larvae at 7 of 14 locations, with 83 larvae found in 100 green bolls in one location. A total of 24 lint cleaner inspections in Durango recorded 558 larvae at the 13 locations inspected. In Coahuila, 18 lint cleaner inspections at 12 locations showed all infested with a total of 324 larvae. (PPC, Mex. Reg., Oct. Rpt.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

BLACK TURPENTINE BEETLE (*Dendroctonus terebrans*) - ARKANSAS - Some infestations remained active in central portion of State. (Ark. For. Pest Rpt., Nov.).

SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) - TEXAS - No known active brood trees. Aerial and ground observations continued. (Young).

IPS BEETLES (*Ips* spp.) - TEXAS - Considerable pine mortality reported in Trinity County. (Young). CALIFORNIA - *I. plastographus* heavy on Monterey pines at Watsonville, Santa Cruz County. (Cal. Coop. Rpt.).

PINE BARK WEEVILS - ARKANSAS - Killed advanced pine reproduction in crop cut areas, but did not attack young seedlings. This infestation is near the Clarke-Pike County border in the same area in which weevils were active in the spring of 1958. (Ark. For. Pest Rpt., Nov.).

FOREST TENT CATERPILLAR (*Malacosma disstria*) - MINNESOTA - Egg mass survey indicates possible increase in area of heavy defoliation in St. Louis County north of Duluth for 1959. Counts averaged 10.5 egg masses per tree in 21 plots over the entire area, with as high as 28 egg masses per tree in some plots. Complete defoliation can be expected with 10 egg masses per tree. (Minn. Ins. Rpt., Nov. 17).

ORANGE-STRIPED OAKWORM (*Anisota senatoria*) - TEXAS - Caused defoliation of red and white oaks in Burleson, Hardin, Jasper, Newton, Polk and Tyler Counties. (Young).

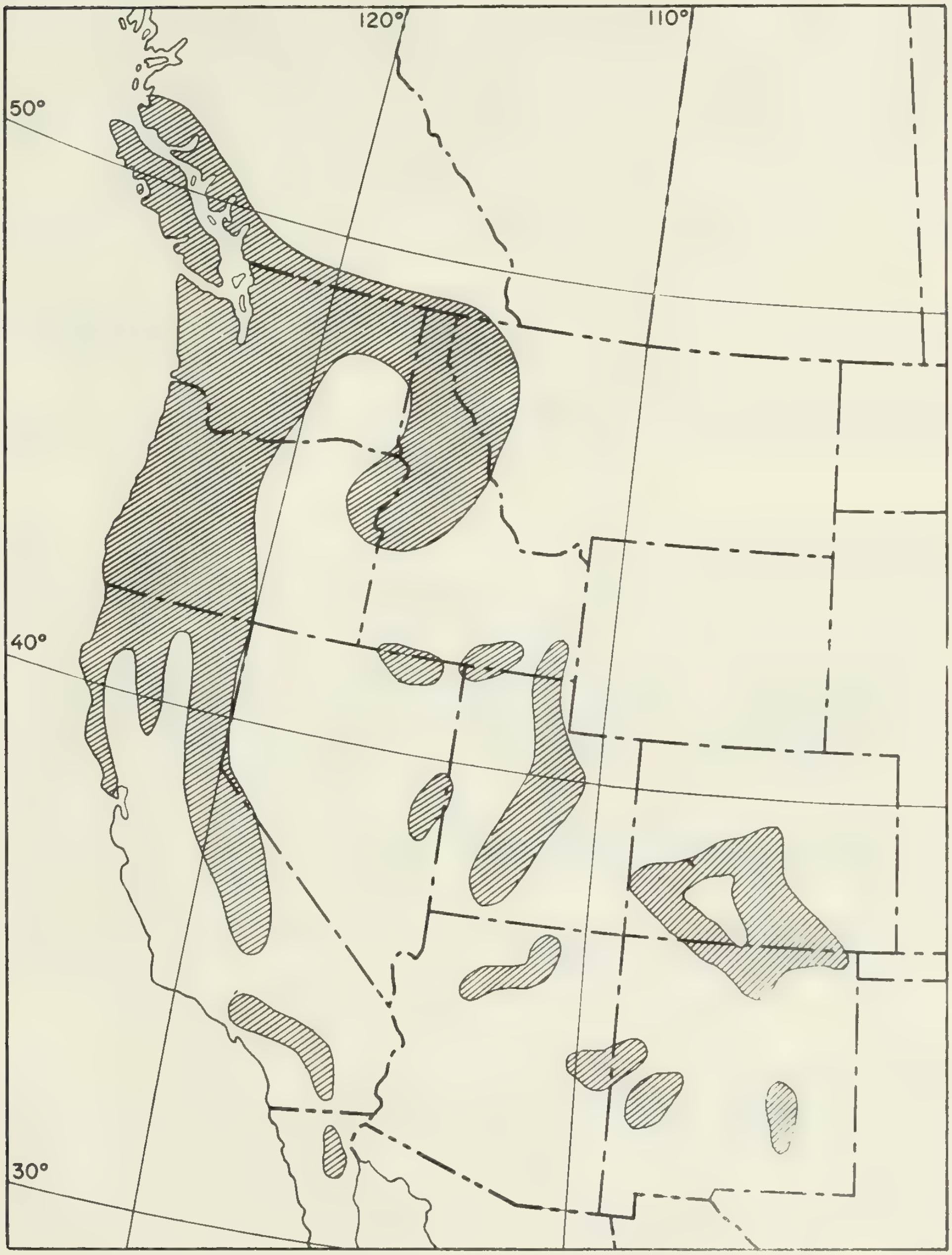
A PINE TIP MOTH - TEXAS - Severe infestation reported throughout eastern part of the State. (young).

PINE WEBWORM (*Tetralopha robustella*) - ARKANSAS - Appeared locally in scattered areas over the State. No serious feeding damage reported. (Ark. For. Pest Rpt., Nov.).

A SAWFLY - TEXAS - Caused partial defoliation of pine and hardwoods in Tyler, Hardin and Polk Counties. An area estimated at 100 acres east of Honey Island seriously infested. (Young).

APHIDS - UTAH - Extremely numerous on rose and some spirea in areas of Cache County. (Knowlton). OKLAHOMA - *Rhopalosiphum rufomaculatum* found on chrysanthemum at Lawton and Comanche. (Hatfield). CALIFORNIA - Populations of *Eriosoma americanum* high on elms in Woodland, Yolo County. (Cal. Coop. Rpt.).

DISTRIBUTION OF FIR ENGRAVER (Scolytus ventralis) in Western North America



Forest Pest Leaflet 13, December 1956

A LEAF ROLLER - TEXAS - Caused damage to ornamentals in Cameron County. (Richardson).

SCALE INSECTS - ALABAMA - Heavy infestation of all stages of *Fiorinia theae* on camellia and burford holly in Lee County. (Guyton). VIRGINIA - *Unaspis euonymi* heavy on euonymus plants in Amelia County and in Reedville, Northumberland County. (Rowell, Wilson, Gruenhagen). SOUTH CAROLINA - An unidentified species of wax scale severe on camellia, privet and boxwood in Abbeville County. (Nettles, et al.). TEXAS - *Icerya purchasi* light on nandina plants in Panola County. (McKay). CALIFORNIA - *Saissetia hemisphaerica* heavy on eugenia in Watsonville, Sants Cruz County. *Coccus hesperidum* heavy on Palo Verde trees in Torrey Pine area, San Diego County, and light on rose-of-sharon in Fortuna, Humboldt County. (Cal. Coop. Rpt.).

ROSE LEAFHOPPER (*Edwardsiana rosae*) - UTAH - Remaining later than usual on rose and spirea in Cache,Box Elder and Salt Lake Counties. (Knowlton, Nov. 15).

WHITEFLIES - UTAH - Adults numerous on some spirea and black raspberry foliage at Logan, Cache County. (Knowlton, Nov. 15). CALIFORNIA - *Pealius kelloggi* heavy on Catalina cherry trees in Carlsbad, San Diego County. (Cal. Coop. Rpt.).

A NOTODONTID (*Datana* sp.) - CALIFORNIA - Heavy on sumac in San Diego, San Diego County. (Cal. Coop. Rpt.).

INSECTS AFFECTING MAN AND ANIMALS

SCREW-WORM (*Callitroga hominivorax*) - OKLAHOMA - Active in Custer County during last 10 days. (Hutton).

CATTLE GRUBS (*Hypoderma* spp.) - TEXAS - *H. lineatum* beginning to appear in backs of cattle in Kerr County. (Blume). CALIFORNIA - An unusually long season reported for *H. bovis* and *H. lineatum* with heavy infestations from August through early November in Calabasas and Agoura areas of Los Angeles County. (L. A. Co. Ext. Ser.).

WINTER TICK (*Dermacentor albipictus*) - OKLAHOMA - Found up to 4 per square inch on necks and heads of small cattle in Pushmataha and McCurtain Counties. (Goin). CALIFORNIA - Infesting deer in Altura area, Modoc County. (Cal. Coop. Rpt.).

SALT-MARSH MOSQUITO (*Aedes sollicitans*) - NORTH CAROLINA - Continues abundant throughout coastal area. (Usry).

STORED-PRODUCT INSECTS

KHAPRA BEETLE (*Trogoderma granarium*) - MEXICO - Surveys were made in Mexicali and Tecate, Baja California, and Guadalajara, Jalisco, with a total of 237 property inspections being made. No positive determinations were made. All known infested sites have been treated except 5 properties involving approximately 6,400,000 cubic feet in Guadalajara, Jalisco. (PPC, Mex. Reg., Oct. Rpt.).

DARK MEALWORM (*Tenebrio obscurus*) - ALABAMA - Numerous in feed rooms in Lee County. (Guyton).

INDIAN-MEAL MOTH (Plodia interpunctella) - TEXAS - Heavy on the outside of bins containing over 7,000 bushels of sorghum in Brazos County. (Randolph). CALIFORNIA - Medium in walnuts in Santa Clara,Santa Clara County. (Cal. Coop. Rpt.).

EUROPEAN EARWIG (Forficula auricularia) - CALIFORNIA - Heavy infestation in fish meal in Salinas, Monterey County. (Cal. Coop. Rpt.).

Stored-grain Insects in Nebraska - Insects recovered from 256 samples of wheat taken from CCC bins during October, 1958, in 22 counties were predominately granary weevil, Cadelle, saw-toothed grain beetle, flat grain beetle and dermestids. In addition, flour beetles (Tribolium spp.), spider beetles, a fungus beetle (Typhaea stercorea) and Indian-meal moth were also collected. Live or dead insects were found in 73 percent of the bins examined; a number of these bins being recently fumigated. Live insects were taken in 17.2 percent of the bins. (Kantack).

BENEFICIAL INSECTS

CONVERGENT LADY BEETLE (Hippodamia convergens) - OKLAHOMA - Counts in alfalfa averaged 0.1-0.3 per sweep in some fields in northeastern area and 0.3-0.5 per sweep in Tillman County. (VanCleave, Hatfield).

MISCELLANEOUS INSECTS

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - LOUISIANA - Found for first time in West Carroll Parish, bringing total number of infested parishes to 44. Treatment was applied to 467 acres in 11 parishes. MISSISSIPPI - Found for the first time in Adams and Choctaw Counties. Treatment was applied to 3,486 acres, mostly in the eradication zones of Amite, Jefferson Davis and Wilkinson Counties. SOUTH CAROLINA - Treatment of all known infestations was completed during October. NORTH CAROLINA - Two additional isolated infestations in Robeson County were treated. FLORIDA - Treatment was applied to more than 5,000 acres bringing the total to 29,300 acres. GEORGIA - About 2,000 acres were treated in several counties. TEXAS - Control was applied to 170 acres in Bexar, Hardin and Harris Counties. (PPC, So. Reg., Oct. Rpt.).

JAPANESE BEETLE (Popillia japonica) - ILLINOIS - Two live beetles were found in traps in the Sheldon area, October 10. Two additional beetles were caught October 24 in traps at East Peoria, a new location for the 1958 season, bringing the total to 5 for this area. The infestation in the Peoria area appears to be wider spread than first indicated. (PPC, Cent. Reg., Oct. Rpt.). TENNESSEE - Treatment was applied to 1,437 acres in 6 eastern counties. NORTH CAROLINA - Twenty-three acres were treated at Spencer, Rowan County, and treatment in this section is expected to be completed early in November. Regulatory treatment was applied to 6 acres of nurseryland in the State. SOUTH CAROLINA - A half-acre of nurseryland was treated. (PPC, So. Reg., Oct. Rpt.).

A CUCUJID (Hemipeplus marginipennis) - CALIFORNIA - Specimens taken in Watsonville area of Santa Cruz County in July 1958. This is a first record for the State. Det. T. J. Spilman. (Cal. Coop. Rpt.).

OLD-HOUSE BORER (Hylotrupes bajulus) - VIRGINIA - Present in subflooring, large timber in basement and in attic of a 3-year old house in New Castle, Craig County. (Rowell). MARYLAND - Infesting joists in a home in Baltimore. (U. Md., Ent. Dept.).

A SUBTERRANEAN TERMITE - UTAH - Caused extensive damage to a home and garage at Logan. (Knowlton).

MILLIPEDES - VIRGINIA - Large numbers in a home and on porch and grounds of the house in Madison County; inside several homes and on patios and surroundings of homes in Culpeper County; and in basement entrance of home in Blacksburg. (Rowell, McLearen, Heltzel). Also in the kitchen of a home in Nelson County. (Morris, Swain). MARYLAND - Troublesome to homeowners in Prince Georges, Carroll and Montgomery Counties. (U. Md., Ent. Dept.).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. yps.	Prod. ornith.	Perid. marg.	Laphyg. frug.	Ala. argil.	Helio. zea
FLORIDA							
Gainesville 11/12-18		2					
Quincy 11/5-11		8					1
MISSISSIPPI							
*State College 11/15-21	134	42	3	2	3		15
NEBRASKA							
Lincoln 10/17-27	64	98	21	5	17		505
North Platte 10/31-11/16	217	419		76	1		16
SOUTH CAROLINA							
Charleston 11/17-23	11	42	9		8		5
TENNESSEE(Counties)							
Blount 11/4-10				1		1	
Cumberland 11/4-10	15	49	1				5
Johnson 11/4-10	9	4	2	2	4		6
Madison 11/4-10	3	4	4	2		1	14
Maury 11/4-10	25	9	1		2		29
Robertson 11/4-10	21	26		1	4		53

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*Two traps - State College.

HIGHLIGHTS OF INSECT OCCURRENCE - 1958

CANADA

Prepared by C. G. MacNay

Weather factors affecting development of insects in Canada in 1958 included unusually high temperatures in British Columbia, drought in the southern prairie region, especially in Saskatchewan, and low early-summer temperatures associated with high precipitation in much of Eastern Canada. Few insect pests caused unusual damage; grasshoppers continued to increase in Western Canada and other outbreaks of note involved variegated and red-backed cutworms, beet webworm, diamondback moth, seed-corn maggot, aphids and root maggots.

The trend of increase in GRASSHOPPER populations that occurred in the interior of British Columbia and in the Prairie Provinces in 1957 continued in 1958. The area involved, although appreciable, was still far less than that affected by the 1945-1950 outbreak. In extreme southern Alberta, the only area of the Province affected, infestations were light and losses were minimized by timely rains and excellent growing conditions. In south central and southeastern agricultural areas of Saskatchewan and in southwestern agricultural areas of Manitoba, large numbers of grasshoppers moved into field crops because of drought; severe damage was common in pastures, hay crops, alfalfa and crops sown on stubble. However, an efficient control campaign and desiccation of eggs combined to restrict losses. A survey of adults in August indicated a marked increase in numbers in Saskatchewan south of Saskatoon and in southwestern agricultural areas of Manitoba.

In British Columbia the most severe outbreak of VARIEGATED CUTWORM (Peridroma margaritosa) in many years caused much damage in the Vancouver delta and the lower Fraser Valley. Severe local infestations of PALE WESTERN CUTWORM (Agrotis orthogonia) occurred on flax and grain in the Lethbridge and Picture Butte areas of Alberta, and in west central agricultural areas of Saskatchewan. RED-BACKED CUTWORM (Euxoa ochrogaster) caused severe damage to cereal, rapseed, flax and garden crops in western Alberta. It occurred also in large numbers throughout parkland areas, including the Peace River district, and in prairie areas as far as Craik and Stalwart in Saskatchewan. The infestation was the most severe and widespread in at least 30 years. In Saskatchewan, damage was severe in the northern agricultural areas and in central and east central agricultural regions, ranging up to 100 percent in crops seeded on fallow and on rape and pea stubble. In central agricultural areas of Manitoba, cutworm damage was severe, notably by ARMYWORM (Pseudaletia unipuncta) near Pilot Mound and Portage La Prairie. In Kent County, Ontario, BLACK CUTWORM (Agrotis ypsilon) fed heavily on tobacco and sugar beets for an unusually long period. In Ontario and Quebec, CUTWORMS caused extensive damage in gardens. ARMYWORM damaged hay and grain in New Brunswick, fruit and vegetables in Nova Scotia and grain in Prince Edward Island. In Newfoundland, BRONZED CUTWORM (Nephelodes emmedonia) occurred in unusual numbers in the St. John's area.

WIREWORMS caused relatively little damage in Alberta and Manitoba, but in Saskatchewan damage in southern and western agricultural areas was more extensive than in recent years, reseeding being necessary in many fields.

BEET WEBWORM (Loxostege sticticalis) occurred in the Prairie Provinces in the most severe and widespread outbreak in 25 years, extensively damaging sugar beets, flax, rape, mustard, safflower and garden crops. Nearly all of the 37,000 acres of sugar beets in southern Alberta were infested, 1,200 acres being defoliated. In Saskatchewan, the northeastern and southeastern agricultural areas were most affected and in Manitoba, the southwestern area.

In Alberta and Saskatchewan, abnormal numbers of larvae of DIAMONDBACK MOTH (*Plutella maculipennis*) damaged mustard, rape and other plants. In southwestern Ontario, the heaviest infestation of APHIDS in many years occurred on wheat, oats, clover, peas, tobacco, potatoes and garden crops; many virus diseases were more common than usual in the area. Peas in Manitoba and peas, corn and oats in New Brunswick were also heavily infested. ALFALFA WEEVIL (*Hypera postica*) increased greatly in numbers in Alberta and Saskatchewan. In west central agricultural areas of Saskatchewan, FLAX BOLLWORM (*Heliothis ononis*) was unusually numerous. SIX-SPOTTED LEAFHOPPER (*Macrosteles fascifrons*)was much less injurious than in 1957 in Western Canada, but in southwestern Ontario it was numerous in grain. In the latter area, damage to tobacco seedlings by SEED-CORN MAGGOT (*Hylemya cilicrura*) was the worst on record. In Alberta and Saskatchewan, large numbers of *Apantesis* sp. damaged pastures, and in Newfoundland a TORTRICID (*Cnephasia virgaureana*), first recorded in 1952, severely damaged red clover and fed on cabbage, peas and ornamentals.

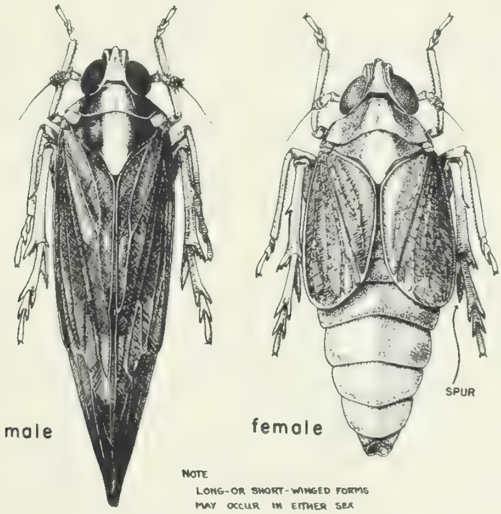
Garden crops, too, were attacked by numerous pests. SIX-SPOTTED LEAFHOPPER spread yellows virus extensively in celery, carrot and lettuce in southern Ontario. In Eastern Canada, where plant growth was generally slow, ROOT MAGGOTS severely damaged crucifers. In the Ottawa Valley, the largest population of DIAMONDBACK MOTH in 10 years and large numbers of a FLEA BEETLE (*Phyllotreta cruciferae*), not previously recorded in Canada, attacked cruciferous crops. PAINTED-LADY (*Vanessa cardui*), unusually numerous on Canada thistle in British Columbia, Alberta and Ontario, caused some damage also to sunflower and to soybeans. APHIDS heavily infested crucifers in Ontario and potatoes in the Maritime Provinces. In southwestern Ontario, second-generation larvae of ONION MAGGOT (*Hylemya antiqua*) damaged onions ready for harvest, for the first time on record. POTATO STEM BORER (*Hydroecia micacea*) severely infested potatoes and rhubarb in Nova Scotia. SLUGS were very injurious to vegetables in Ontario and Quebec and BROAD MITE (*Hemitarsonemus latus*) damaged greenhouse cucumbers at Leamington, Ontario.

Fruit insects of importance included CODLING MOTH (*Carpocapsa pomonella*) in the Okanagan Valley, British Columbia, where special control measures were necessary because of the unusually early development. In Nova Scotia, however, the overwintered population was the smallest in 5 years. Two first records of pests on strawberry in Canada involved OMNIVOROUS LEAF TIER (*Cnephasia longana*), identified from larvae found in fruit grown in the lower Fraser Valley, British Columbia, in 1957 and 1958; and CURLED ROSE SAWFLY (*Allantus cinctus*), feeding on foliage in southern Vancouver Island. BRAMBLE LEAFHOPPER (*Ribautiana tenerrima*) was found to overwinter as an adult at Victoria, British Columbia. In the Niagara Peninsula, Ontario, EUROPEAN FRUIT LECANIUM (*Lecanium corni*) was more abundant than usual on fruit trees, and APPLE MAGGOT (*Rhagoletis pomonella*) on prune. In Novia Scotia, CANKERWORMS and WINTER MOTH (*Operophtera brumata*) extensively damaged apple and a continued increase in parasitism of EYE-SPOTTED BUD MOTH (*Spilonota ocellana*) was associated with a modified spray program. In Newfoundland, PEAR LEAF BLISTER MITE (*Eriophyes pyri*) was recorded for the first time in the Province.

The Rice Delphacid, *Sogata orizicola* Muir, and Two Closely Related Species (Homoptera: Fulgoroidea: Delphacidae)

The rice delphacid, *Sogata orizicola* Muir, is, as far as known, the sole vector of a virus disease of rice which has been called "hoja blanca". This disease was first observed in the Western Hemisphere about 1954, and in the United States in September, 1957, at Belle Glade, Florida. An additional infection was found in September, 1958, at Bay Saint Louis, Mississippi. The disease is not prevalent in the major rice-producing areas of the Orient, although an apparently similar infection of rice is known in Japan. Symptoms of the disease include yellowish-white discoloration or streaking of the leaves and affected plants often fail to head. Yields of rice in infected fields are often reduced 25 to 50 percent and the disease is capable of completely ruining the crop, particularly late plantings. The estimated loss to the rice crop in Cuba in 1956 was 25 percent. The insect has been recorded in Argentina, Colombia, Venezuela, Costa Rica, British Guiana and Cuba, in addition to the United States. First records in this country are September 14, 1957, at Belle Glade, Florida, and September 3, 1958, at Bay Saint Louis, Mississippi.

The preferred survey procedure for *S. orizicola* consists of sweeping of cultivated and volunteer rice, not overlooking small patches that may be present at the margin of fields. General sweepings of other grasses do not appear to be very satisfactory for collecting *S. orizicola*; however, *S. fucifera* (Horvath) may be abundant.

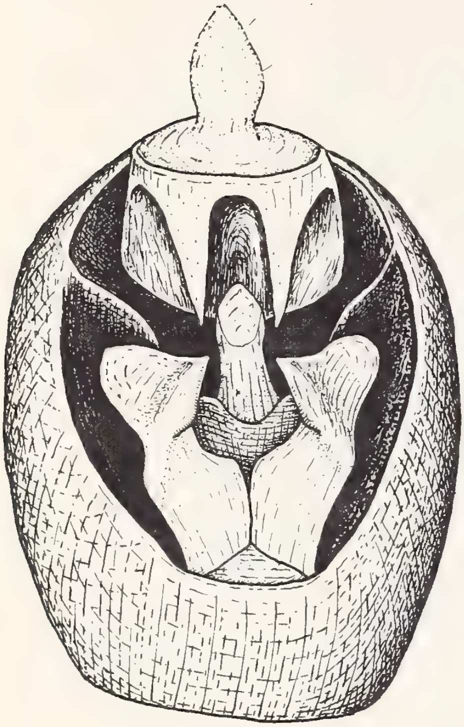


NOTE
LONG-OR SHORT-WINGED FORMS MAY OCCUR IN EITHER SEX

SOGATA ORIZICOLA

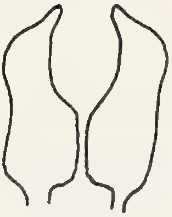
The non-specialist can recognize the family and more important members of the genus by the characters illustrated in the accompanying habitus drawings. The following points should be noted:

1. The family Delphacidae is easily distinguished from all other Homoptera by the movable spur at the apex of the hind tibia.
2. The genus *Sogata* is made up of small and slender species which have/are:
   - (1) 3.5-4 mm. in length in the long-winged form; slightly over 3 mm. in the short-winged form. Note - most specimens of both sexes will have long wings.
   - (2) a pale-yellow stripe running down the center of the dorsum of the head and thorax.
   - (3) males dark-brown with smoky-colored wings that are darker at the apex.
   - (4) females usually with a uniform yellowish to tan color.



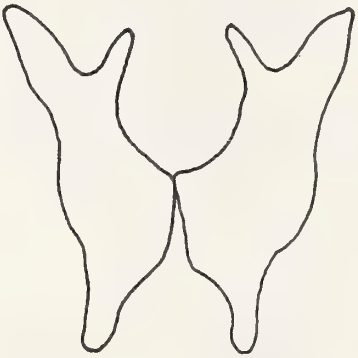
ORIZICOLA

male genitalia



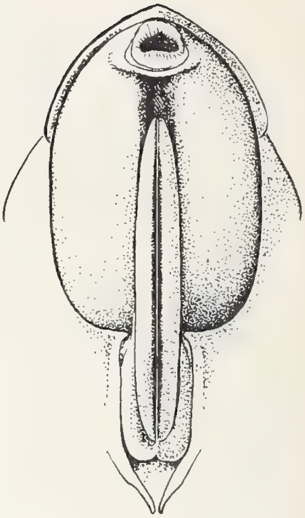
CUBANA

styles only



FURCIFERA

styles only



female genitalia

Identification to species in the genus Sogata is based on characters found in the structures of the male genitalia and particularly in the styles which have characteristic outlines for each species. The styles are observed best when the genital capsule is studied in a direct posterior view. The styles will be seen as paired structures and are the most obvious components of the genitalia. Accompanied by the drawings, the following notes should allow recognition of the species treated here:

(1) Sogata orizicola Muir. Apex of style broad with inner margins rather pointed and with a marked carina. See drawing. This rice pest is known in the United States only from Florida and Mississippi.

(2) Sogata furcifera (Horvath). Apex of style with deep cleft giving a "mitten-like" outline. See drawing. A very common species found throughout southern United States.

(3) Sogata cubana (Crawford). Apex of style small, comparatively slender and gently curved inward. See drawing. Known in United States only in Florida.

(Illustrative and taxonomic material prepared by Insect Identification and Parasite Introduction Laboratories, ENT, ARS) CEIR 8(48) 11-28-58

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

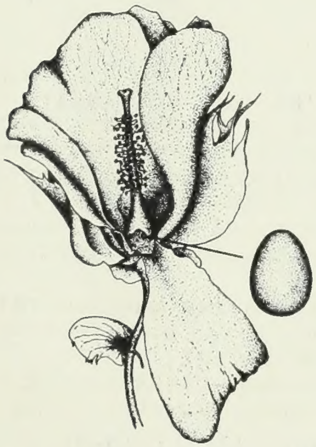
PHILIPPINE COTTON BOLL WEEVIL (*Amorphoidea lata* Motschulsky)

Economic Importance: Though cotton is of little economic importance in the Philippines, at the present time, this weevil is considered to be its most important pest and is prevalent wherever the crop is grown. The greatest injury is caused by the larvae; a large percentage of infested bolls drop. Adults in some instances may destroy flowers and very young bolls. Because of the exceedingly short life-history of the species, larval introduction through seeds into the United States is not expected, but the adults could be contained in plants, soil, seeds or raw cotton. Larval damage is similar to that caused by *Anthonomus grandis* except that the larvae of *A. lata* are almost always found in the ovary of the flower rather than in the square as is the case with *A. grandis*. Three additional species of *Amorphoidea* have been recorded as pests of cotton in Asiatic countries. They are *A. arcuata* in India, *A. pectoralis* in Java and *A. rufa* in Indochina.

Distribution: Philippine Islands (Manila, Laguna, Batangas, Mindoro, Ilocos Norte, Rombolon, Mindanao, Palawan and possibly other Provinces).

Hosts: All cultivated and wild varieties of cotton and *Thespesia lampas*.

Life History and Habits: The adults become most noticeable during mid-morning, entering the flowers of host plants. Copulation takes place in the flowers and eggs are laid shortly thereafter, in cavities in the tissue of the base of the staminal sheath. Several eggs may be deposited in each flower. Eggs hatch in 1 to 3 days and larvae begin feeding in the ovules and other soft parts of the square. As many as 9 larvae have been found in each boll after it has fallen to the ground. Larval development takes from 5 to 11 days, of which about half is spent as a resting stage in the soil. When larvae are in their feeding stage, they may completely destroy one or more of the ovules. In most cases the fruit drops to the ground before maturing. Sometimes undersized adults develop due to curtailed food supply, but normally larvae will die before maturity if the food supply is not adequate. Pupation takes place in the soil, about 10 to 20 mm. deep, and lasts from 3 to 5 days. The total life-cycle varies from 11 to 23 days, averaging 17 days. Adult hibernation occurs from June to October in the Philippines since no host plants are in bloom during that period.

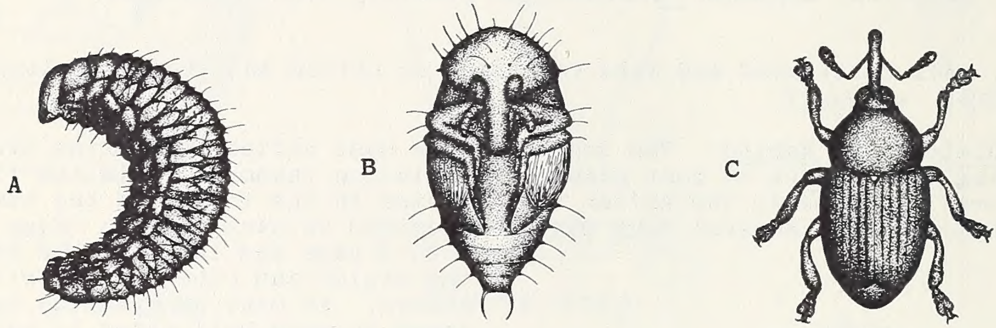


Egg (greatly enlarged)
Located at Base of Staminal
Sheath of Cotton Flower

(Curculionidae, Coleoptera)

No. 68 of Series

Description: Adults are largely dark brown, 3-4 mm. long and about 1.2 mm. wide. Head minutely and shallowly pitted, sparsely pubescent; eyes lateral, convex and nearly circular. Rostrum about as long as prothorax, sides parallel. Antennae arising from middle of rostrum in female, beyond or in front of middle in male, elbowed, clavate; scape as long as succeeding joints, resting in groove at basal half of rostrum and reaching to eye. Prothorax $1\frac{1}{2}$ times as broad as long, sides rounded, broadest in middle, narrowed slightly behind and strongly constricted anteriorly, minutely pitted, and pale, with fine sparse golden pubescent below. Scutellum present. Elytra ovate, striated and finely pitted; pygidium exposed. Femora toothed. Eggs smooth, pearly white, elliptical to ovoid, about 0.6 mm. long and 0.4 mm. wide. Larvae wrinkled, grayish-white, crescent-shaped and legless with few scattered darker hairs. Pupae naked and resemble adults in general form; grayish-white with few scattered darker hairs. (Prepared in Plant Pest Survey Section in cooperation with other ARS agencies).
CEIR 8(48) 11-28-58



Figures of Amorphoidea lata (A) Larva (B) Pupa (C) Adult

Figures from Woodworth, H.E. 1922. Philippine Agr. 11(3): 75-81

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